

What is claimed is:

1. A printer for producing rolls of wallpaper, comprising:

a housing in which is located a media path which extends from a blank media intake to a wallpaper exit

5 slot;

a multi-color roll width removable printhead located in the housing and across the media path;

the printhead being supplied by separate ink reservoirs, the reservoirs connected to the printhead by a

an ink supply harness, there being a disconnect coupling between the reservoirs and the printhead;

one or more input devices for capturing operator instructions;

10 a processor which accepts operator inputs which are used to configure the printer for producing a particular roll.

2. The printer of claim 1, further comprising:

an internal dryer, the dryer located between the printhead and the winding area and adapted to lengthen

15 the path when additional drying is required.

3. The printer of claim 1, further comprising:

a transverse cutting mechanism located between the printhead and the winding area and adapted to

divide a media web from a wound portion in response to an instruction from the processor.

20

4. The printer of claim 1, further comprising:

a slitting mechanism adapted to longitudinally slit a media web after it has been printed on.

25 5. The printer of claim 1, further comprising:

a bar code scanner which communicates with the processor and through which data is input.

6. The printer of claim 1, further comprising:

a well, adapted to retain a tote;

30 the well being located external to the cabinet and adjacent to an exit slot;

the well having at each end, spindles for aligning, retaining and removing a core, and for winding wallpaper onto the core.

7. The printer of claim 1, further comprising:

- 5 on a front exterior surface of the cabinet, a tilting video display for displaying information about wallpaper that the printer may print.

8. The printer of claim 7, wherein:

the video display is a touchscreen which can receive operator selections for use by the processor.

10

9. The printer of claim 1, wherein:

the well retains a closed tote having a gap through which wallpaper is introduced during winding.

10. The printer of claim 9, wherein:

- 15 the media cartridge loading area further comprises one or more vertically stacked locations where a media cartridge can be stored.

11. The printer of claim 1, wherein:

the printhead is mounted on a rail on which it slides into and out of a printing position across the path.

20

12. The printer of claim 1, wherein:

the path further comprises a pre-heater located before the printhead in the path.

13. The printer of claim 11, further comprising:

- 25 an air supply and a tube for bringing a supply of air to the printhead which supply prevents media from contacting the printhead.

- 30 14. The printer of claim 11, further comprising:

a capper motor, the capper motor driving a capping and blotting device;
the capping device sealing the printhead when not in use in order to prevent contamination from entering the printheads.

5 15. The printer of claim 14, wherein:
the capping and blotting device further comprises a blotter, which moves into and out of position and which is used for absorbing ink fired from the printheads.

16. The printer of claim 11, further comprising:
10 one or more rail microadjusters for accurately adjusting a gap between the printhead and the media onto which it is printing.

17. The printer of claim 1, wherein:
the path comprises a generally straight path which is self threading.

15 18. The printer of claim 13, wherein:
the pre-heater is a flat platen located below a moving web.

19. The printer of claim 2, further comprising:
20 a door which covers an opening into a lower compartment of the dryer;
the door being moveable from a closed position which covers the opening, to an open position in which the media passes through the opening into the lower compartment and out of the compartment, also through the opening.

25 20. The printer of claim 4, wherein:
the slitting mechanism further comprises a pair of rotating brackets between which extend a number of transverse shafts, each shaft having one or more cutters, the end brackets rotatable so that any shaft can be selected, or that no shaft be selected for cutting the media web.

21. A printer as claimed in claim 1 wherein the blank media is printed by the printhead at a rate exceeding 0.02 square meters per second (775 square feet per hour).
22. A printer as claimed in claim 1 wherein the blank media is printed by the printhead at a rate exceeding 0.1 square meters per second (3875 square feet per hour).
23. A printer as claimed in claim 1 wherein the blank media is printed by the printhead at a rate exceeding 0.2 square meters per second (7750 square feet per hour).
24. A printer as claimed in claim 1 wherein the printhead has more than 7680 nozzles.
25. A printer as claimed in claim 1 wherein the printhead has more than 20,000 nozzles.
26. A printer as claimed in claim 1 wherein the printhead has more than 100,000 nozzles.
27. A printer as claimed in claim 1 wherein the printhead has more than 250,000 nozzles.
28. A printer as claimed in claim 1 wherein the printhead prints ink drops with a volume of less than 5 picoliters.
29. A printer as claimed in claim 1 wherein the printhead prints ink drops with a volume of less than 3 picoliters.
30. A printer as claimed in claim 1 wherein the printhead prints ink drops with a volume of less than 1.5 picoliters.
31. A printer as claimed in claim 1 wherein it is self contained and comprises:
a cabinet in which is located a media path which extends from a media cartridge loading area to a winding area;
a full width digital color printhead located in the media path;

a processor which accepts operator inputs which are used to configure the printer for producing a particular roll; and

the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.

5

32. A printer as claimed in claim 1 adapted for use with a media cartridge, the media cartridge comprising:

a case in which a roll of blank media may be deployed;

the case having two halves, hinged together, an area between the two halves, when closed, defining a media supply slot; and

10

the case having internally and adjacent to the slot, a pair of rollers, at least one of the rollers being a driven roller which is supported at each end, by the case, for rotation by an external motor.

33. A printer as claimed in claim 1 adapted for use with a consumer tote for a roll of wallpaper, the tote comprising:

15

a disposable exterior in which is formed a main access flap and a pair of core access openings; and the tote having an interior in which is located a disposable core which is aligned with the access openings.

34. A printer as claimed in claim 1 including a transverse cutter, the transverse cutter comprising:

20

a chassis having end plates;

the end plates being separated to allow a web of media to pass between them;

the end plates supporting between them a cutting blade; and

the blade supported at each end to perform a cutting motion which begins on one side of the web and finishes on an opposite side of the web.

25

35. A printer as claimed in claim 1 including a slitting mechanism, the slitting mechanism comprising:

a chassis having end plates;

the end plates being separated by a transverse portion of the chassis to allow a web of media to pass between them;

30

one or more rotating slitting shafts extending between the end plates, each shaft having one or more slitters arranged along its length, each slitter having a cutting edge; and
the slitting mechanism selectively engageable to either enter or not enter a path followed by the web according to an input provided by an operator of the printer.

5

36. A printer as claimed in claim 1 including a dryer for a printer such as a wallpaper printer, the dryer comprising:

a compartment with a top opening for receiving a media web fed from the printer;

a source of heated air located above the top opening for blowing heated air into the opening to dry
printing on the media web.

10

37. A printer as claimed in claim 1 further comprising:

a cabinet in which is located a media path which extends from a media loading area to a winding area;

a printhead located in the media path;

15 a processor which accepts operator inputs from one or more input devices which are used to configure the printer for producing a particular roll; and

the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer wherein,

the length and design of the roll are determined by the operator inputs.

20

38. A printer as claimed in claim 1 adapted for use in a method of printing wallpaper onto a web of media, comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a winding area, there being a printhead located in the media path, a

25 processor which accepts operator inputs from one or more input devices;

using one or more input devices which communicate with the processor to capture data from an operator regarding a specification for an operator's requirements;

using the processor to operatively control the printer according to the data; and

printing a single roll of wallpaper, on demand, according to a selected pattern.

30

39. A printer as claimed in claim 1 for use in a method for operating a wallpaper printing business, the method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a printhead and from the printhead to a dispensing slot;

5 using one or more printer input devices which communicate with a processor to capture data regarding one or more customer's requirements;

the data comprising at least a customer selected pattern;

printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern;

and

10 charging a customer for the roll.

40. A printer as claimed in claim 1 for use in a method for operating a wallpaper printing franchise, comprising the steps of:

providing to franchisees, an on-demand printer comprising a cabinet in which is located a media path

15 which extends from a media loading area to a printhead and from the printhead to a dispensing slot;

the printer having one or more printer input devices which communicate with a processor to capture data regarding one or more customer requirements, the data comprising at least a customer selected pattern;

providing the franchisee with a collection of patterns in a digital storage medium that can be read by

20 the printer;

enabling the franchisee to print a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern; and

obtaining or attempting to obtain a fee from the franchisee.

25 41. A printer as claimed in claim 1 adapted to produce rolls of wallpaper, the printer comprising:

a frame in which is located a media path which extends from a media loading area to a winding area;

a printhead located across the media path;

one or more input devices for capturing operator instructions;

a processor which accepts operator inputs which are used to configure the printer for producing a

30 particular roll; and

the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.

42. A printer as claimed in claim 1 for use in a method for printing wallpaper onto a web of media, the

5 method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path, there being a full

width printhead located across the media path, there being a processor which accepts operator inputs

from one or more input devices and which controls the printer;

using one or more input devices which communicate with the processor to capture data from an

10 operator regarding a specification;

running the printer according to the data;

printing a single roll of wallpaper, on demand, according to a selected pattern and configuration;

changing the pattern according to a new datum from an operator; and

then printing a new roll onto the same web.

15

43. A printer as claimed in claim 1 for use in a method for drying a moving web of media in a printer such as a wallpaper printer, the method comprising the steps of:

loading the web in a path that traverses a compartment in a dryer within the printer, the compartment having an opening across the top;

20 allowing the moving web to descend into the compartment, as required; and

blowing heated air from above the opening.

44. A printer as claimed in claim 1 for use in a method of supplying a media web to a wallpaper printer, comprising the steps of:

25 opening a reusable case;

placing into the case a core onto which has been located a supply roll of blank wallpaper media;

supporting the core for rotation within the case;

leading a free edge of the roll between a pair of rollers and past an edge of the open case; then

with the rollers located within the case and on either side of the web, closing the case and loading it

30 into a printer.

45. A printer as claimed in claim 1 further comprising a printhead assembly which prints onto a moving web that follows a path, the assembly comprising:

a full width printhead located across the path;

- 5 the printhead comprising a color printhead which is at least as wide as the web;
the printhead being supplied with a number of different inks which are remote from the printhead and which supply the printhead through tubes.

46. A printer as claimed in claim 1 adapted for use with a consumer tote for a roll of wallpaper, the
10 tote comprising:

a disposable exterior in which is formed a main access flap and a pair of core access openings;

the tote having an interior in which is located a disposable core which is aligned with the access openings;

both openings exposing a moulded coupling, one coupling attached to each end of the core, at least one

- 15 of the couplings being a driven coupling and adapted to engage a driving spindle that rotates the core.

47. A printer as claimed in claim 1 further comprising a removable printhead assembly which prints onto a moving web, the assembly comprising:

a full width stationary printhead located on a rail along which it slides for service and removal;

- 20 a number of replaceable ink reservoirs which supply the printhead with different inks;

the printhead comprising a color printhead which is at least as wide as the web; and

the printhead being supplied with the different inks through tubes which can be disconnected so the printhead may be removed.

- 25 48. A printer as claimed in claim 1 wherein the printer is a self threading printer for producing rolls of wallpaper, comprising:

a media loading area adapted to support a media cartridge in a position so that a media supply slot of the cartridge is closely adjacent to a pilot guide;

a cabinet housing a media path which extends from the pilot guide to a printed media dispensing slot;

- 30 a printhead located across the media path;

a processor which accepts operator inputs which are used to configure the printer for producing a particular roll;

a motor within the cabinet for advancing a media web out of the media cartridge; and

one or more other motors adapted to urge the media along the path and out of the slot.

5

49. A printer as claimed in claim 1 for producing wallpaper on-demand via a method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which passes a printhead on the way to a dispensing slot;

10

selecting a pattern and a configuration;

using one or more printer input devices which communicate with a processor to input the pattern and the configuration; and

printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern and configuration.

15